

[The interaction of Potential Energy Wells](#)

Brian Strom.

[mailto: brianstrom999@aol.com](mailto:brianstrom999@aol.com)

<https://www.facebook.com/brian.strom.750>

Blog: <https://edisconstant.wordpress.com/>

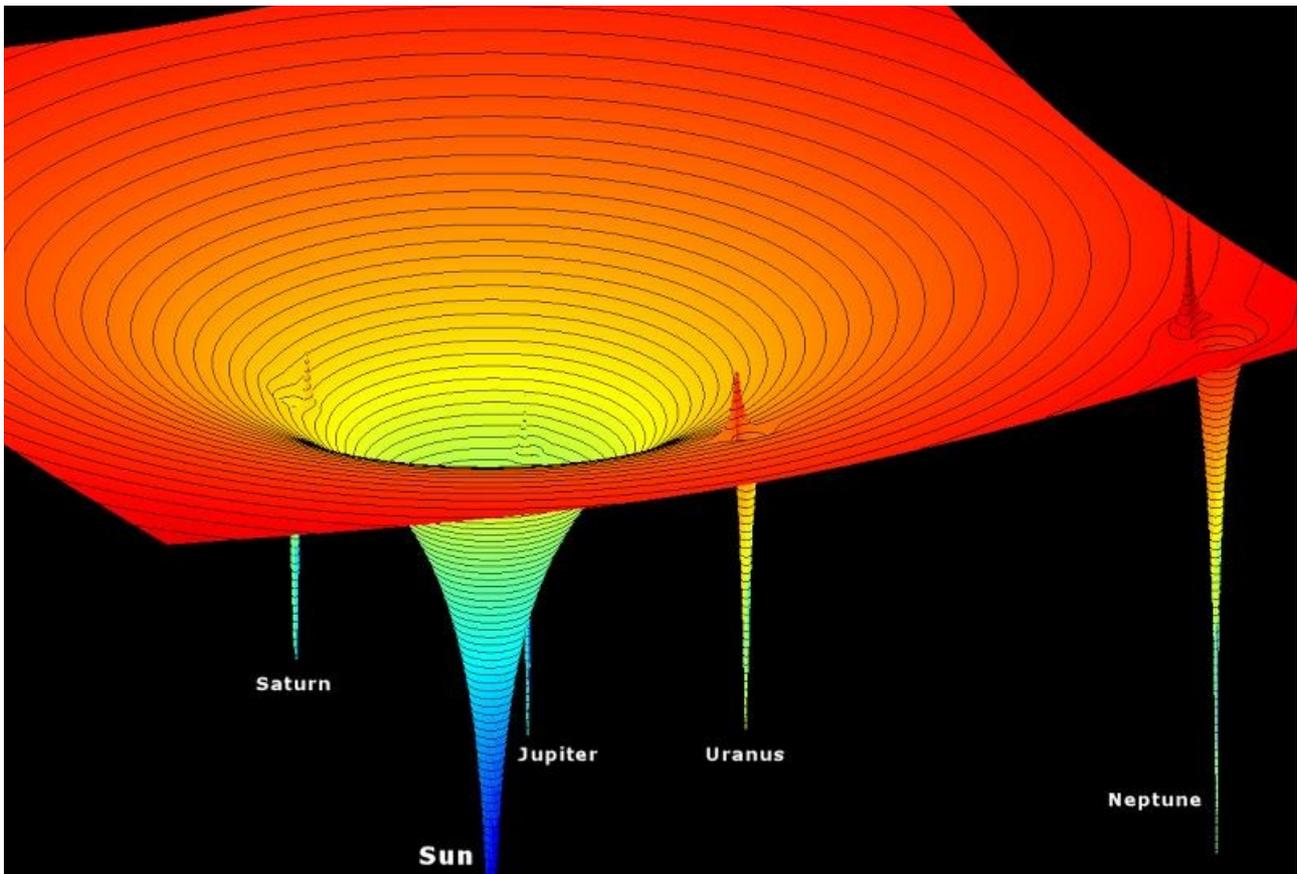
[Abstract:](#)

Einstein's General Theory of Relativity proposes the distortion of the fabric of space by objects, creating a Potential Energy Wells. For an object moving under the influence of a Potential Energy Well, the assumption is that energy is transposed between Potential and Kinetic, but the total energy remains constant. This paper gives a simplistic analysis of the various possible interactions between Potential Energy Wells. The analysis is not exhaustive, but it lays the foundation for subsequent papers on the Hubble Tension and other conjectures. It may also help our understanding of the mysterious nature of Potential Energy Wells which may be one of the "keys to the universe".

[1. Introduction:](#)

In the previous paper - The Mystery of Potential Energy Wells [1] - we discussed how Einstein's General Theory of Relativity proposes that the fabric of space is distorted by "matter", creating Potential Energy Wells. In this paper we discuss the various interactions between these Potential Energy Wells.

Figure 1 shows the larger Potential Energy Wells of the solar system. The planetary Potential Energy Wells sit at various levels in the large Potential Energy Well of the Sun, and their depth is in proportion to their intrinsic energy (mass).



[Figure 1. Potential Energy Wells of the Solar System.](https://rainbowboys.blogspot.com/.../homemade-gravity...)

Diagram by: <https://rainbowboys.blogspot.com/.../homemade-gravity...>

We can observe how movement through space is affected by these Potential Energy Wells such that most motion in the solar system appears to be orbital, with most objects orbiting other objects.

Only in “empty” outer space, can an object move in a straight line, if it is not influenced by the Potential Energy well of any other object.

From our observations, we believe that Energy cannot be created or destroyed, and that Energy can only be transposed from one form into another.

During elliptical orbital motion, Potential Energy - *energy of position* - is transposed into Kinetic Energy - *energy of motion* - and back again, on a cyclical basis. However, the Total Energy remains constant.

Whilst we can understand the principles of orbital motion in space, the observations of orbital motion on Earth are often mis-interpreted in “force” equations as gravity, mass and weight. Here we only consider energy.

Note: A positive or negative convention for Potential Energy is not required at this stage.

2. Colliding Potential Energy Wells:

Two objects, and their Potential Energy Wells, will tend to move together if they are near enough to influence of each other. Some of their Potential Energy will convert into Kinetic Energy as the objects move faster towards each other.

If the two objects collide, this Kinetic Energy will be redistributed amongst the various particles within the objects. The increase in average Kinetic Energy of the particles is described as “heat” and an increase in “temperature”.

The diagram shows two similar-sized objects merging together. Potential Energy is transposed into Kinetic Energy and, upon impact, the KE is redistributed. The net Potential Energy is the sum of the two Potential Energies, minus the residual Kinetic Energy. See Figure 2:

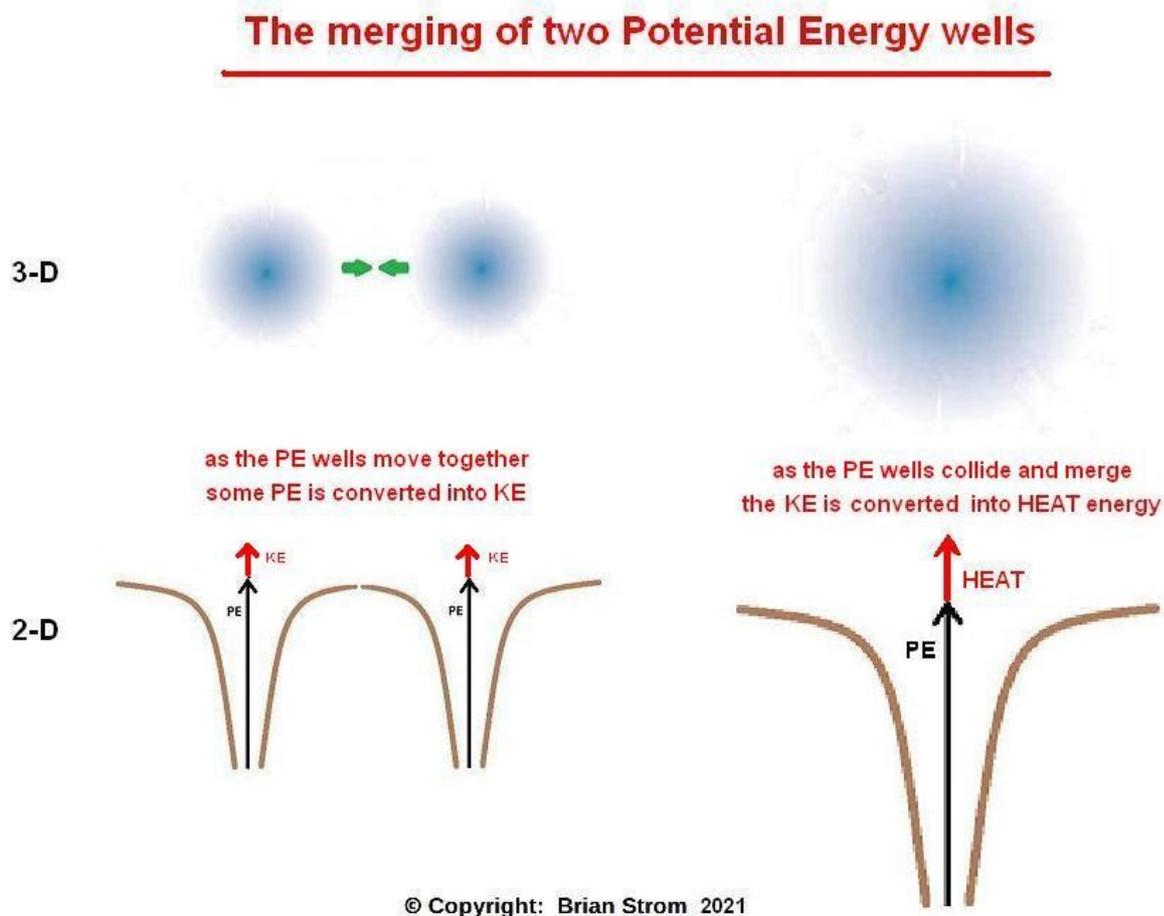


Figure 2. The merging of two Potential Energy Wells.

3. Orbiting Potential Energy Wells:

Potential Energy Wells can combine in a number of other ways. Here the two objects go into orbit around each other, with no collision. Some Potential Energy is transposed into Kinetic Energy. This Kinetic Energy continues in the form of orbital Kinetic Energy whilst total energy remains constant. See Figure 3:

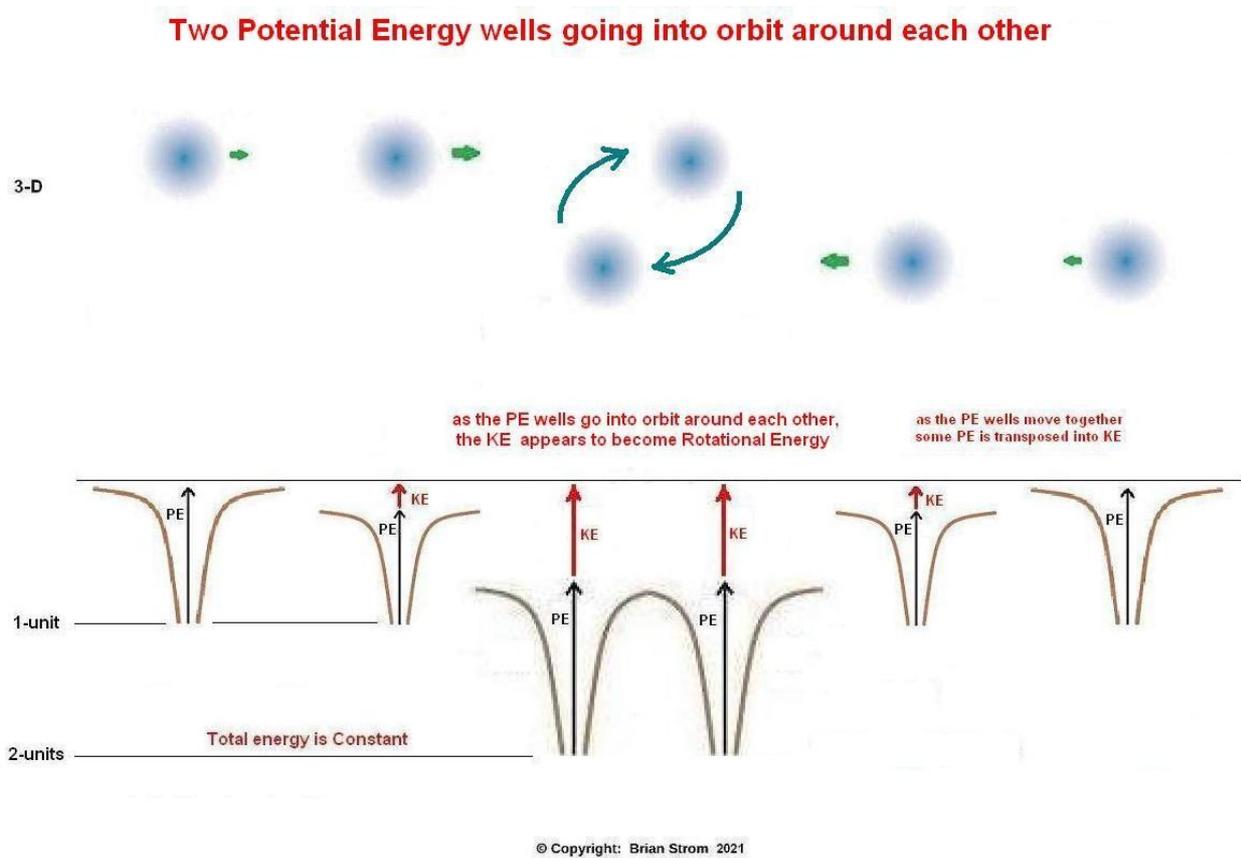


Figure 3. The resultant Potential Energy Wells are orbiting each other.

4. Spinning Potential Energy Wells:

The Potential Energy Wells can combine in other ways. Here the two objects collide and coalesce. Some of the Kinetic Energy will appear as Rotational Kinetic Energy (spin). Some of the Kinetic Energy will be distributed as heat whilst total energy will remain constant. See Figure 4:

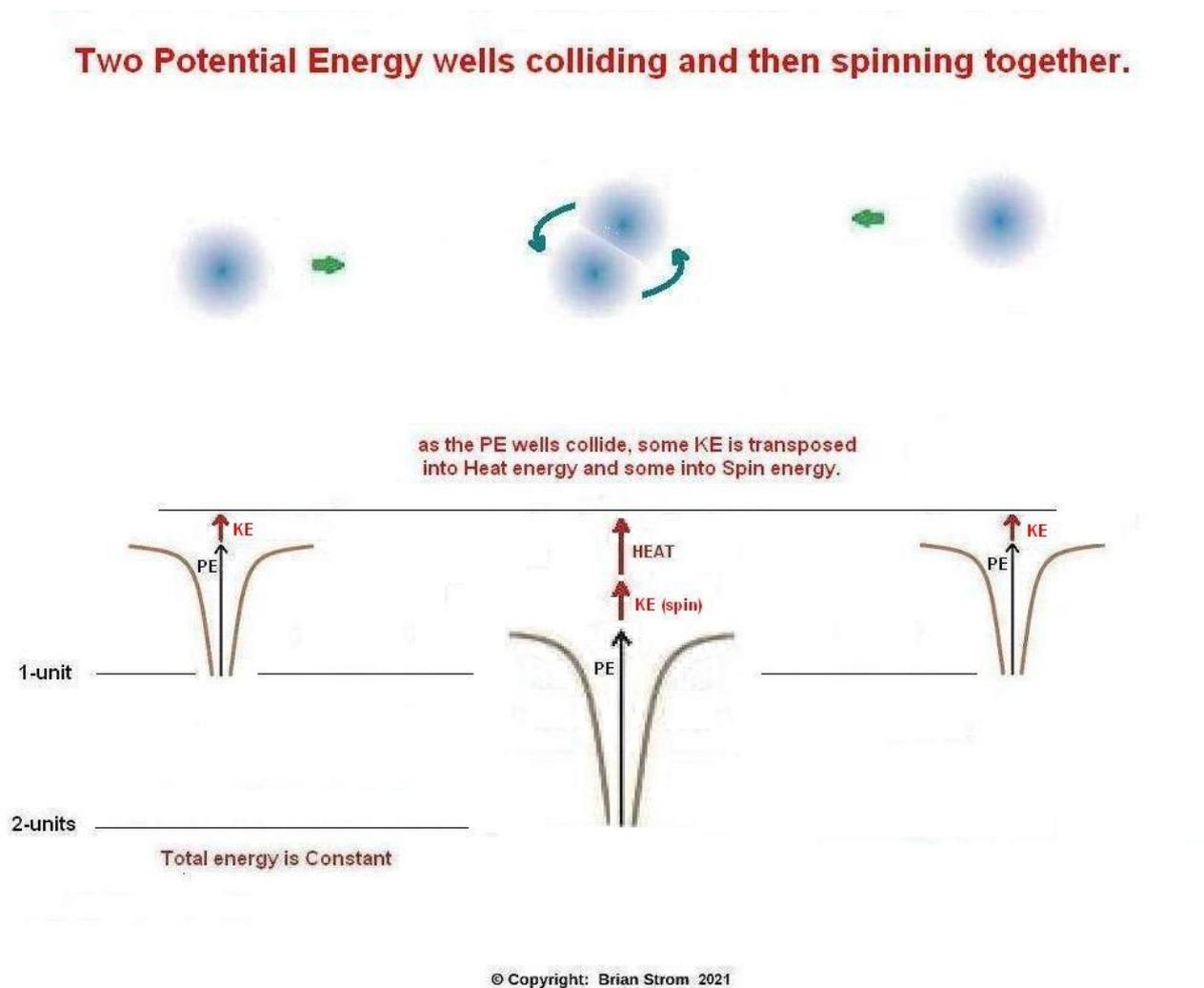


Figure 4. The resultant Potential Energy Well is spinning.

5. How stars and planets can form from dust:

This simple model shows how Potential Energy Wells can combine and merge. This applies to all collections of objects, of whatever size. For instance, clouds of dust can become stars, with planets orbiting around. See Figure 5:

Some of the Potential Energy is transposed into Kinetic Energy in the form of orbital and spin energy. The residual Kinetic Energy will be distributed as heat. If there is enough heat, then a fusion reaction can be triggered to form a star.

It might appear that new Rotational Energy (orbital and spin) is being created from nowhere, magically. But, if we measured the Rotational Energy from a wider segment of space, we would see that the Total Rotational Energy of the universe remains constant.

Formation of new stars and planets

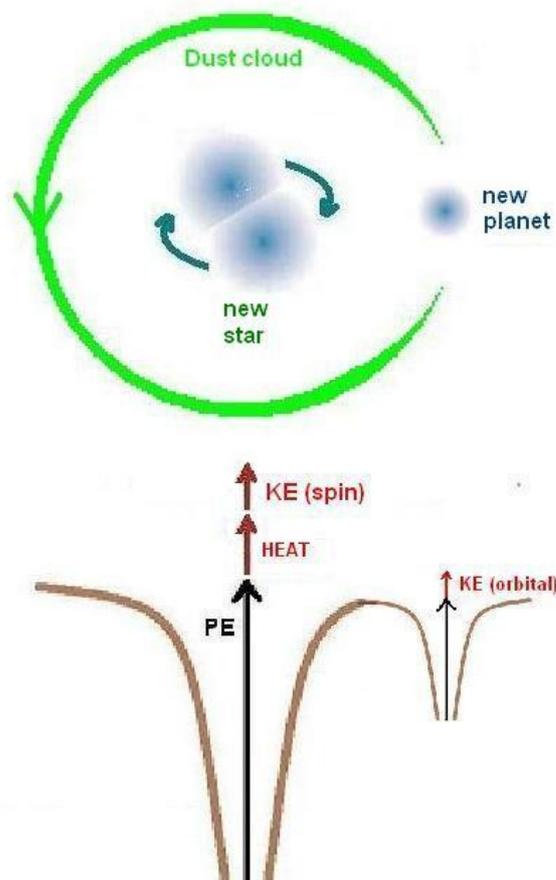


Figure 5. The formation of planets and stars.

6. The formation of a planet in more detail:

As more Potential Energy Wells are added to an object, so Potential Energy and Kinetic Energy (orbital, spin, heat) are added. There are many possible resultant configurations for the composition of a planet. See Figure 6:

The outer gaseous layers may rotate along different axes to the molten or solid layers, as seems to be the case for the Gas Giants - Jupiter, Saturn etc.
See "AI" Physics - Energy Fields (Part 3) [2]

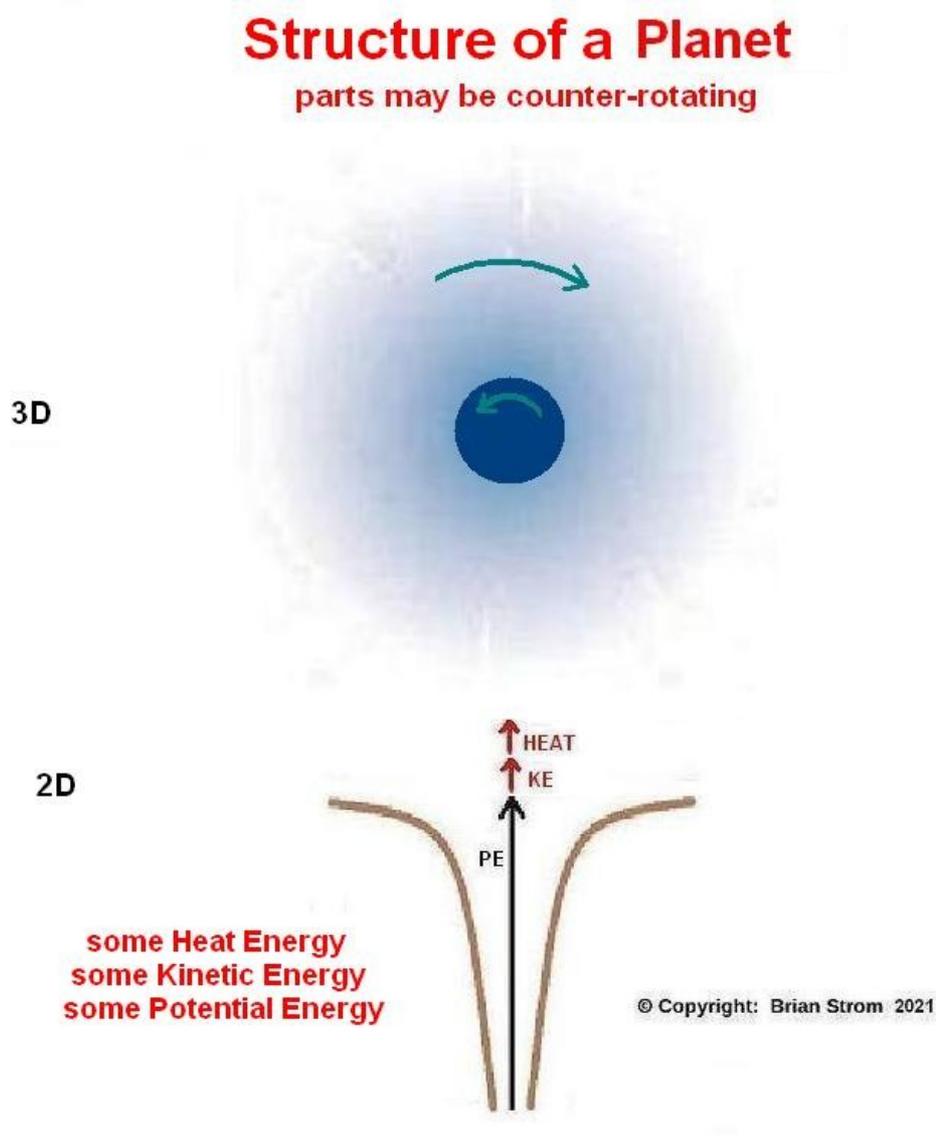


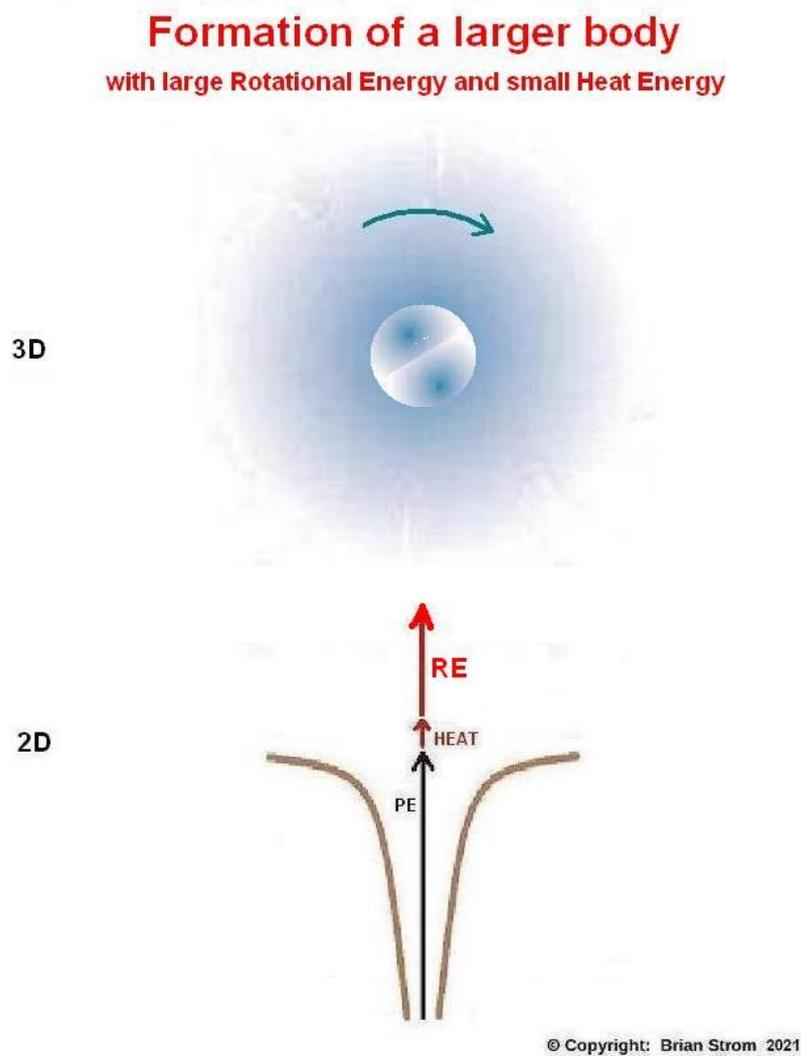
Figure 6. The formation of a planet in detail.

7. The formation of a larger object:

From first principles: The formation of a larger body: As "matter" is added and Heat Energy increases, a star will be formed if a fusion reaction is triggered.

But what if more Kinetic Energy is added in the form of spin and orbital energy, but there is not enough Heat Energy to trigger a fusion reaction?

Will the body have a large enough Rotational Energy Field (gravity) to form what astrophysicists would call a Black Hole?



[Figure 7. The formation of a larger object in detail.](#)

8. Summary and Conclusions:

This paper gives a simplistic analysis of the various possible interactions between Potential Energy Wells. The analysis is not exhaustive, but it lays the foundation for subsequent papers on the Hubble Tension and other conjectures.

The assumption is, for an object moving under the influence of a Potential Energy well, there is a transposition of energy between Kinetic and Potential, but the total energy remains constant.

It may help our understanding of the mysterious nature of Potential Energy Wells which may be one of the "keys to the universe".

Further information on the Blog: <https://edisconstant.wordpress.com/>

9. References:

- [1] The Mystery of Potential Energy Wells: <https://vixra.org/abs/2109.0046>
- [2] 'AI' Physics – Energy Fields (Part 3): <https://vixra.org/abs/1906.0492>

=====
Copyright © 2021 Brian Strom. All rights reserved.
=====